

Appendix E

Botanical Report
2007

Botanical Survey and Impact Assessment
For the Proposed Hillick Ranch Timber Harvest Plan/Timber Conversion Plan

Prepared For:

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Date:

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REDWOOD
COAST
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1.0 INTRODUCTION AND OBJECTIVES

A botanical survey was conducted for the Hillick Ranch THP/TCP in order to determine if any rare and endangered plant species and/or rare plant communities were present within the project area. Survey findings are useful in assessing the potential for significant negative impacts on botanical resources and vital in mitigating those impacts to a level less than significant. The following report is based on *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (DFG 2000).

Botanical nomenclature in this report follows *The Jepson Manual/Higher Plants of California* (Hickman 1993), although common names are borrowed occasionally from other sources in cases where *The Jepson Manual* lists none.

2.0 PROJECT AREA DESCRIPTION AND ECOLOGICAL PROFILE

The Hillick Ranch THP/TCP is geo-referenced to the Camp Meeker quadrangle; T8N R10W, sections 33 and 34. The project area is located approximately 1.5 miles east of Guerneville along Highway 116 in Sonoma County CA. The THP/TCP consists of two units (A and B) predominately located on two adjacent ridge tops. The harvest/conversion units extend from the top of the ridges down slope to a gradient of 30-40%. A new tractor road, to access Unit B, crosses a class two watercourse (Appendix A). Elevations range from approximately 400-650 feet above mean sea level. The predominant aspect is northeast (Unit A) and southeast (Unit B).

Vegetation within the project area consists primarily of Douglass fir (*Pseudotsuga menziesii* var. *menziesii*) dominated North coast coniferous forest (Upland Douglas Fir Forest) (Holland 1986). A minor secondary component of the overall stand composition is characterized by redwood (*Sequoia sempervirens*) (Upland Redwood Forest) and tanoak (*Lithocarpus densiflorus* var. *densiflorus*) (Tan-oak Forest) dominated stands which tend to occur in micro sites across the harvest units along with madrone (*Arbutus menziesii*) and an occasional coast live oak (*Quercus agrifolia*). The average conifer diameter at breast height (DBH) is between 24"-30" across the units but there is a unique portion of Unit B which supports a more dynamic canopy structure as several (~6) clumped, mature second growth Douglass fir and redwood trees persist.

Characteristic mid level vegetation within the shrub layer is dominated by evergreen huckleberry (*Vaccinium ovatum*), tan oak (*Lithocarpus densiflorus* var. *densiflorus*), poison oak (*Toxicodendron diversilobum*), and California hazelnut (*Corylus cornuta* var. *californica*). Evergreen huckleberry and tan oak saplings cover approximately 30-40% of the understory.

The understory is sparsely dominated by modesty (*Whipplea modesta*), and California milkwort (*Polygala californica*) with a greater diversity of species occurring where sunlight penetrates to the forest floor beneath occasional over story gaps along old skid trails, roads and, landings.

Vegetation associated with the class two water courses lack any significant riparian hardwood component as tanoak (*Lithocarpus densiflorus* var. *densiflorus*) and madrone (*Arbutus menziesii*) persist within and along the stream channels and support the occasional big leaf maple (*Acer macrophyllum*), wax myrtle (*Myrica californica*), California bay laurel (*Umbellularia californica*), California hazelnut (*Corylus cornuta* var. *californica*), sword fern (*Polystichum munitum*), and western trillium (*Trillium ovatum*).

The flora associated with a small grassy opening (<1 acre) located at the southern end of Unit A is dominated by introduced annual and perennial grassland vegetation (Sawyer and Keeler-Wolf 1995). Characteristic species include: common velvet grass (*Holcus lanatus*), brome (*Bromus tectorum*), soft chess (*Bromus hordeaceus*), silver European hairgrass (*Aira caryophyllea*), blue wildrye (*Elymus glaucus*), orchard grass (*Dactylis glomerata*), ox-eye daisy (*Leucanthemum vulgare*), and French broom (*Genista monspessulana*).

3.0 SCOPING AND METHODS

Scoping strategies, survey methods, and impact assessments/mitigations were consistent with the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (DFG 2000), *Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants* (CNPS 1998), *California Forest Practice Rules* (CDF 2006) and the *California Environmental Quality Act* (CEQA) (State of California revised 2001).

3.1 Scoping

The project area was scoped with the current inventories of the California Natural Diversity Database (CNDDB 2006, 2007) and *Rare Plant Inventory* (CNPS 2006, 2007) to determine all List 1-3 plant taxa known from the Camp Meeker quadrangle (wherein the project lies) and adjacent quads. The result was the Target Species List found below. Plant communities were classified using *Preliminary Descriptions of the Terrestrial Plant Communities of California* (Holland 1986) and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). CNPS inventory quadrangle data includes only CNPS list 1-3 plants. Therefore, plant listings considered were CNPS list 1-3, as well as state and federal rare, threatened, and/or endangered. CNPS list 4 plants were also considered but are not covered under CEQA.

Target Species List

| Name (Scientific/Common) | CNPS | Habitat | Blooms | Habitat Present? |
|--|-----------|---|---------|------------------|
| <i>Abronia umbellata</i> ssp. <i>breviflora</i> pink sand-verbena | List 1B.1 | Coastal dunes | Jun-Oct | No |
| <i>Agrostis blasdalei</i> Blasdale's bent grass | List 1B.2 | Coastal bluff scrub, Coastal dunes, Coastal prairie | May-Jul | No |
| <i>Allium peninsulare</i> var. <i>franciscanum</i> Franciscan onion | List 1B.2 | Cismontane woodland, Valley and foothill grassland/clay, volcanic, often serpentinite | May-Jun | Marginal |

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|--|-----------|---|------------------|----------|
| <i>Alopecurus aequalis</i> var. <i>sonomensis</i> Sonoma alopecurus | List 1B.1 | Marshes and swamps(freshwater), Riparian scrub | May-Jul | No |
| <i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo | List 1B.2 | Broadleafed upland forest(openings), Chaparral, Cismontane woodland | Apr-Jul | Yes |
| <i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i> Baker's manzanita | List 1B.1 | Broadleafed upland forest, Chaparral/often serpentinite | Feb-Apr | Yes |
| <i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i> The Cedars manzanita | List 1B.2 | Closed-cone coniferous forest, Chaparral/serpentinite seeps | Feb-May | No |
| <i>Arctostaphylos densiflora</i> Vine Hill manzanita | List 1B.1 | Chaparral(acid marine sand) | Feb-Apr | No |
| <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> Rincon manzanita | List 1B.1 | Chaparral(rhyolitic), Cismontane woodland | Feb-Apr | Marginal |
| <i>Blennosperma bakeri</i> Sonoma sunshine | List 1B.1 | Valley and foothill grassland(mesic), Vernal pools | Mar-May | No |
| <i>Brodiaea californica</i> var. <i>leptandra</i> narrow-anthered California brodiaea | List 1B.2 | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/volcanic | May-Jul | Marginal |
| <i>Calamagrostis crassiglumis</i> Thurber's reed grass | List 2.1 | Coastal scrub(mesic), Marshes and swamps(freshwater) | May-Jul | No |
| <i>Calochortus raichei</i> The Cedars fairy-lantern | List 1B.2 | Closed-cone coniferous forest, Chaparral/serpentinite | May-Aug | No |
| <i>Calystegia purpurata</i> ssp. <i>saxicola</i> coastal bluff morning-glory | List 1B.2 | Coastal dunes, Coastal scrub, North Coast coniferous forest | May-Sep | Marginal |
| <i>Campanula californica</i> swamp harebell | List 1B.2 | Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Marshes and swamps(freshwater), North Coast coniferous forest/mesic | Jun-Oct | Yes |
| <i>Carex albida</i> white sedge | List 1B.1 | Bogs and fens, Marshes and swamps(freshwater) | May-Jul | No |
| <i>Carex comosa</i> bristly sedge | List 2.1 | Coastal prairie, Marshes and swamps(lake margins), Valley and foothill grassland | May-Sep | No |
| <i>Castilleja uliginosa</i> Pitkin Marsh Indian paintbrush | List 1A | Marshes and swamps(freshwater) | Jun-Jul | No |
| <i>Ceanothus confusus</i> Rincon Ridge ceanothus | List 1B.1 | Closed-cone coniferous forest, Chaparral, Cismontane woodland/volcanic or serpentinite | Feb-Jun | No |
| <i>Ceanothus foliosus</i> var. <i>vineatus</i> Vine Hill ceanothus | List 1B.1 | Chaparral | Mar-May | No |
| <i>Ceanothus purpureus</i> holly-leaved ceanothus | List 1B.2 | Chaparral, Cismontane woodland/volcanic, rocky | Feb-Jun | No |
| <i>Chlorogalum pomeridianum</i> var. <i>minus</i> dwarf soaproot | List 1B.2 | Chaparral(serpentinite) | May-Aug | No |
| <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower | List 1B.2 | Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub/sandy | Apr- Jul(Aug) | No |
| <i>Chorizanthe cuspidata</i> var. <i>villosa</i> | List 1B.2 | Coastal dunes, Coastal prairie, | May- | |

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|--|-----------|---|--------------|----------|
| woolly-headed spineflower | | Coastal scrub/sandy | Jul(Aug) | No |
| <i>Chorizanthe valida</i> Sonoma spineflower | List 1B.1 | Coastal prairie(sandy) | Jun-Aug | No |
| <i>Cirsium andrewsii</i> Franciscan thistle | List 1B.2 | Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub/mesic, sometimes serpentinite | Mar-Jul | No |
| <i>Clarkia imbricate</i> Vine Hill clarkia | List 1B.1 | Chaparral, Valley and foothill grassland/acidic sandy loam | Jun-Aug | No |
| <i>Cordylanthus maritimus</i> ssp. <i>palustris</i> Point Reyes bird's-beak | List 1B.2 | Marshes and swamps(coastal salt) | Jun-Oct | No |
| <i>Cordylanthus tenuis</i> ssp. <i>capillaries</i> Pennell's bird's-beak | List 1B.2 | Closed-cone coniferous forest, Chaparral/serpentinite | Jun-Sep | No |
| <i>Delphinium bakeri</i> Baker's larkspur | List 1B.1 | Broadleafed upland forest, Coastal scrub, Valley and foothill grassland/decomposed shale, often mesic | Mar-May | No |
| <i>Delphinium luteum</i> yellow larkspur | List 1B.1 | Chaparral, Coastal prairie, Coastal scrub/rocky | Mar-May | No |
| <i>Dirca occidentalis</i> western leatherwood | List 1B.2 | Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland/mesic | Jan-Mar(Apr) | Yes |
| <i>Downingia pusilla</i> dwarf downingia | List 2.2 | Valley and foothill grassland(mesic), Vernal pools | Mar-May | No |
| <i>Erigeron angustatus</i> narrow-leaved daisy | List 1B.2 | Chaparral(serpentinite or volcanic) | May-Sep | No |
| <i>Erigeron biolettii</i> streamside daisy | List 3 | Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest/rocky, mesic | Jun-Oct | Marginal |
| <i>Erigeron serpentinae</i> serpentine daisy | List 1B.3 | Chaparral(serpentinite, seeps) | May-Aug | No |
| <i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat | List 3.2 | Chaparral, Coastal prairie, Valley and foothill grassland/serpentinite | (May)Jun-Sep | No |
| <i>Erythronium revolutum</i> coast fawn lily | List 2.2 | Bogs and fens, Broadleafed upland forest, North Coast coniferous forest/mesic, streambanks | Mar-Jul(Aug) | Marginal |
| <i>Fritillaria liliacea</i> fragrant fritillary | List 1B.2 | Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland/often serpentinite | Feb-Apr | No |
| <i>Gilia capitata</i> ssp. <i>chamissonis</i> dune gilia | List 1B.1 | Coastal dunes, Coastal scrub | Apr-Jul | No |
| <i>Gilia capitata</i> ssp. <i>tomentosa</i> woolly-headed gilia | List 1B.1 | Coastal bluff scrub(rocky, outcrops) | May-Jul | No |
| <i>Gilia millefoliata</i> dark-eyed gilia | List 1B.2 | Coastal dunes | Apr-Jul | No |
| <i>Hemizonia congesta</i> ssp. <i>leucocephala</i> Hayfield tarplant | List 3 | Coastal scrub, Valley and foothill grassland/sometimes roadsides | Apr-Oct | No |
| <i>Hesperervax sparsiflora</i> var. <i>brevifolia</i> short-leaved evax | List 2.2 | Coastal bluff scrub(sandy), Coastal dunes | Mar-Jun | No |
| <i>Horkelia marinensis</i> | List 1B.2 | Coastal dunes, Coastal prairie, | May-Sep | |

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|--|-----------|---|------------------|----------|
| short-leaved evax | | Coastal scrub/sandy | | No |
| <i>Horkelia tenuiloba</i> Point Reyes horkelia | List 1B.2 | Broadleaved upland forest, Chaparral, Valley and foothill grassland/mesic openings, sandy | May-Jul | Marginal |
| <i>Lasthenia burkei</i> Burke's goldfields | List 1B.1 | Meadows and seeps(mesic), Vernal pools | Apr-Jun | No |
| <i>Lasthenia conjugens</i> Contra Costa goldfields | List 1B.1 | Cismontane woodland, Playas(alkaline), Valley and foothill grassland, Vernal pools/mesic | Mar-Jun | No |
| <i>Lasthenia macrantha</i> ssp. <i>bakeri</i> Baker's goldfields | List 1B.2 | Closed-cone coniferous forest(openings), Coastal scrub, Meadows and seeps, Marshes and swamps | Apr-Oct | No |
| <i>Lasthenia macrantha</i> ssp. <i>macrantha</i> perennial goldfields | List 1B.2 | Coastal bluff scrub, Coastal dunes, Coastal scrub | Jan-Nov | No |
| <i>Legenere limosa</i> legenere | List 1B.1 | Vernal pools | Apr-Jun | No |
| <i>Leptosiphon jepsonii</i> Jepson's leptosiphon | List 1B.2 | Chaparral, Cismontane woodland/usually volcanic | Apr-May | No |
| <i>Leptosiphon rosaceus</i> rose leptosiphon | List 1B.1 | Coastal bluff scrub | Apr-Jul | No |
| <i>Lessingia arachnoidea</i> Crystal Springs lessingia | List 1B.2 | Cismontane woodland, Coastal scrub, Valley and foothill grassland/serpentine, often roadsides | Jul-Oct | Marginal |
| <i>Lessingia hololeuca</i> woolly-headed lessingia | List 3 | Broadleaved upland forest, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland/clay, serpentine | Jun-Oct | Marginal |
| <i>Lilium pardalinum</i> ssp. <i>pitkinense</i> Pitkin Marsh lily | List 1B.1 | Cismontane woodland, Meadows and seeps, Marshes and swamps(freshwater)/mesic, sandy | Jun-Jul | No |
| <i>Limnanthes vincularis</i> Sebastopol meadowfoam | List 1B.1 | Meadows and seeps, Valley and foothill grassland, Vernal pools/vernally mesic | Apr-May | No |
| <i>Lupinus eximius</i> San Mateo tree lupine | List 3.2 | Chaparral, Coastal scrub | Apr-Jul | No |
| <i>Lupinus tidestromii</i> Tidestrom's lupine | List 1B.1 | Coastal dunes | Apr-Jun | No |
| <i>Mertensia bella</i> Oregon lungwort | List 2.2 | Meadows and seeps, Upper montane coniferous forest/mesic | May-Jul | No |
| <i>Microseris paludosa</i> marsh microseris | List 1B.2 | Closed-cone coniferous forest, Cismontane woodland, Coastal scrub, Valley and foothill grassland | Apr-Jun(Jul) | No |
| <i>Monardella villosa</i> ssp. <i>globosa</i> robust monardella | List 1B.2 | Broadleaved upland forest(openings), Chaparral(openings), Cismontane woodland, Coastal scrub, Valley and foothill grassland | Jun- Jul(Aug) | Marginal |
| <i>Navarretia leucocephala</i> ssp. <i>bakeri</i> | | Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and | | |

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|---|-----------|---|-------------------|----------|
| Baker's navarretia | List 1B.1 | foothill grassland, Vernal pools/mesic | Apr-Jul | Marginal |
| <i>Navarretia leucocephala</i> ssp. <i>plieantha</i> many-flowered navarretia | List 1B.2 | Vernal pools(volcanic ash flow) | May-Jun | No |
| <i>Pleuropogon hooverianus</i> North Coast semaphore grass | List 1B.1 | Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest/open areas, mesic | Apr-Aug | Marginal |
| <i>Polygonum marinense</i> Marin knotweed | List 3.1 | Marshes and swamps(coastal salt or brackish) | (Apr)May-Aug(Oct) | No |
| <i>Potentilla hickmanii</i> Hickman's cinquefoil | List 1B.1 | Coastal bluff scrub, Closed-cone coniferous forest, Meadows and seeps(vernally mesic), Marshes and swamps(freshwater) | Apr-Aug | No |
| <i>Rhynchospora alba</i> white beaked-rush | List 2.2 | Bogs and fens, Meadows and seeps, Marshes and swamps(freshwater) | Jul-Aug | No |
| <i>Rhynchospora californica</i> California beaked-rush | List 1B.1 | Bogs and fens, Lower montane coniferous forest, Meadows and seeps(seeps), Marshes and swamps(freshwater) | May-Jul | Marginal |
| <i>Rhynchospora capitellata</i> brownish beaked-rush | List 2.2 | Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Upper montane coniferous forest/mesic | Jul-Aug | Marginal |
| <i>Rhynchospora globularis</i> var. <i>globularis</i> round-headed beaked-rush | List 2.1 | Marshes and swamps(freshwater) | Jul-Aug | No |
| <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i> Point Reyes checkerbloom | List 1B.2 | Marshes and swamps(freshwater, near coast) | Apr-Sep | No |
| <i>Sidalcea hickmanii</i> ssp. <i>viridis</i> Marin checkerbloom | List 1B.3 | Chaparral(serpentine) | May-Jun | No |
| <i>Sidalcea malviflora</i> ssp. <i>purpurea</i> purple-stemmed checkerbloom | List 1B.2 | Broadleafed upland forest, Coastal prairie | May-Jun | No |
| <i>Streptanthus glandulosus</i> var. <i>hoffmanii</i> secund jewel-flower | List 1B.3 | Chaparral, Cismontane woodland, Valley and foothill grassland(often serpentine)/rocky | Mar-Jul | No |
| <i>Streptanthus morrisonii</i> ssp. <i>elatus</i> Three Peaks jewel-flower | List 1B.2 | Chaparral(serpentine) | Jun-Sep | No |
| <i>Streptanthus morrisonii</i> ssp. <i>hirtiflorus</i> Dorr's Cabin jewel-flower | List 1B.2 | Closed-cone coniferous forest, Chaparral/serpentine | Jun | No |
| <i>Streptanthus morrisonii</i> ssp. <i>morrisonii</i> Morrison's jewel-flower | List 1B.2 | Chaparral(serpentine, rocky, talus) | May-Sep | No |
| <i>Trifolium amoenum</i> showy Indian clover | List 1B.1 | Coastal bluff scrub, Valley and foothill grassland(sometimes serpentine) | Apr-Jun | No |
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|--|-----------|--|---------|-----|
| <i>Trifolium buckwestiorum</i> Santa Cruz clover | List 1B.1 | Broadleafed upland forest, Cismontane woodland, Coastal prairie/gravelly, margins | Apr-Oct | Yes |
| <i>Trifolium depauperatum</i> var. <i>hydrophilum</i> saline clover | List 1B.2 | Marshes and swamps, Valley and foothill grassland(mesic, alkaline), Vernal pools | Apr-Jun | No |
| <i>Triphysaria floribunda</i> San Francisco owl's-clover | List 1B.2 | Coastal prairie, Coastal scrub, Valley and foothill grassland/usually serpentinite | Apr-Jun | No |
| <i>Triquetrella californica</i> coastal triquetrella | List 1B.2 | Coastal bluff scrub, Coastal scrub/soil | | No |

3.2 Methods

Floristic field surveys were conducted during sensitive plant blooming windows unless species were readily identifiable by vegetative characteristics, or reference sites were visited and sensitive plants were found blooming outside the expected windows. Floristic surveys were conducted using intuitively-controlled, habitat-focused techniques, with the majority of survey effort in potential sensitive plant habitat. Habitats within the project site were surveyed to inventory the plants present. All vascular plants observed (Appendix B) were identified to the taxonomic level necessary to exclude Target Species.

3.3 Survey dates and Surveyors

Matt Richmond (B.S. Biological Sciences/botany emphasis) spent a total of 16.5 hours searching for rare plants on June 19, July 20, 2006 and on May 15, 2007. Survey Routes and coverage area is shown in Appendix A.

4.0 FINDINGS

No rare, endangered, or threatened plant species (CNPS list 1-4) were located during survey.

5.0 POTENTIAL IMPACT ASSESSMENT

Survey findings indicate that the proposed project will have no impact on rare plants or rare plant communities.

6.0 DISCUSSION

While many rare plants are known to occur within this region, habitats in the conversion area are limited to mostly closed canopy North-coast coniferous forest and a small area (less than one acre) of ruderal grassland land vegetation.

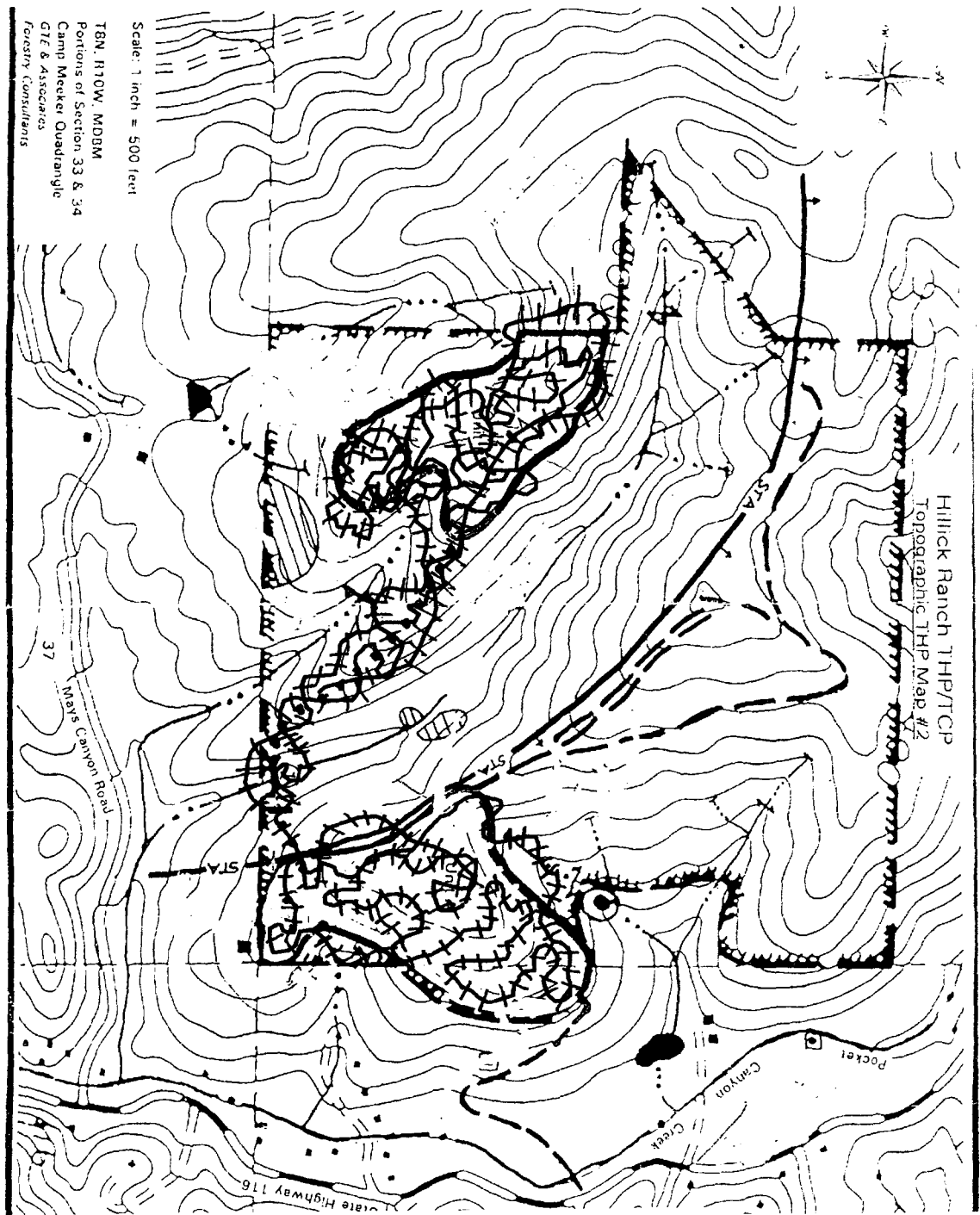
7.0 PROTECTION MEASURES

No protection measures are recommended.

9.0 REFERENCES

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APPENDIX A: SURVEY ROUTES



Survey Effort (June, July 2006 and, May 2007)

Hillick Ranch THP/TCP
Somoma County, California
Prepared by:
Redwood Coast Associates
July 19, 2007

++++ **Combined Survey Routes**

**APPENDIX B: PLANTS OBSERVED ON THE PROPERTY ORGANIZED
PHYLOGENETICALLY**

The nomenclature for the list of plants found on the project site follows Hickman (1993).

The plant list is organized by major plant group in the following order: Vascular Plants – Lycophyta; Vascular Plants – Sphenophyta; Vascular Plants -Pterophyta; Vascular Plants - Gymnosperms Conifers; Vascular Plants - Anthophyta Dicots Herbs; Vascular Plants Monocots – Grasses; Vascular Plants Monocots - Sedges and Rushes; Vascular Plants Monocots - Herbs.

* = Non-native

VASCULAR PLANTS DIVISION SPHENOPHYTA

EQUISETACEAE

| | |
|---|----------------------|
| <i>Equisetum hyemale</i> ssp. <i>affine</i> | Common Scouring Rush |
| <i>Equisetum telmatia</i> ssp. <i>braunii</i> | Giant Horsetail |

VASCULAR PLANTS DIVISION PTEROPHYTA

BLECHNACEAE

| | |
|-----------------------------|------------|
| <i>Woodwardia fimbriata</i> | Chain Fern |
|-----------------------------|------------|

DENNSTAEDTIACEAE

| | |
|--|--------------|
| <i>Pteridium aquilinum</i> var. <i>pubescens</i> | Bracken Fern |
|--|--------------|

DRYOPTERIDACEAE

| | |
|------------------------------|------------|
| <i>Polystichum munitum</i> | sword fern |
| <i>Athyrium felix-femina</i> | lady fern |

PTERIDACEAE

| | |
|---------------------------------|-------------------------|
| <i>Adiantum jordanii</i> | common maiden hair fern |
| <i>Pentagramma triangularis</i> | goldback fern |

VASCULAR PLANTS DIVISION CONIFEROPHYTA—GYMNOSPERMS

PINACEAE

| | |
|--|--------------|
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i> | Douglass-fir |
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TAXODIACEAE

| | |
|-----------------------------|---------------|
| <i>Sequoia sempervirens</i> | coast redwood |
|-----------------------------|---------------|

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS
CLASS–DICOTYLEDONAE- TREES

| | | |
|-----------|---------------------------------|----------------|
| ACERACEAE | | |
| | <i>Acer macrophyllum</i> | big leaf maple |
| ERICACEAE | | |
| | <i>Arbutus menziesii</i> | madrone |
| FAGACEAE | | |
| | <i>Lithocarpus densiflorus</i> | tan oak |
| | <i>Quercus agrifolia</i> | coast live oak |
| LAURACEAE | | |
| | <i>Umbellularia californica</i> | California bay |

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS
CLASS–DICOTYLEDONAE-SHRUBS AND WOODY VINES

| | | |
|-----------------|---|-----------------------|
| ANACARDIACEAE | | |
| | <i>Toxicodendron diversilobum</i> | poison oak |
| ASTERACEAE | | |
| | <i>Baccharis pilularis</i> | coyote brush |
| BETULACEAE | | |
| | <i>Corylus cornuta</i> var. <i>californica</i> | hazelnut |
| CAPRIFOLIACEAE | | |
| | <i>Lonicera hispidula</i> var. <i>vacillans</i> | honeysuckle |
| | <i>Symphoricarpos mollis</i> | creeping snowberry |
| ERICACEAE | | |
| | <i>Arctostaphylos columbiana</i> | hairy manzanita |
| | <i>Chimaphila menziesii</i> | little prince's pine |
| | <i>Vaccinium ovatum</i> | evergreen huckleberry |
| FABACEAE | | |
| | * <i>Genista monspessulana</i> | French broom |
| LAMIACEAE | | |
| | <i>Satureja douglasii</i> | yerba Buena |
| PHILADELPHACEAE | | |
| | <i>Whipplea modesta</i> | modesty |
| RHAMNACEAE | | |

Ceanothus cuneatus var. *cuneatus*
Ceanothus thyrsiflorus
Rhamnus californica

buckbrush
blueblossom
California coffeeberry

ROSACEAE

**Cotoneaster pannosa*
Rosa gymnocarpa
Rubus leucodermis
Rubus ursinus

cotoneaster
wood rose
white-stemmed raspberry
California blackberry

SCROPHULARIACEAE

Mimulus aurantiacus

bush monkey flower

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS **CLASS–DICOTYLEDONAE-HERBS**

APIACEAE

Osmorhiza chilense
Sanicula crassicaulis
**Torilis arvensis*

sweet cicely
Pacific sanicle
hedge-parsley

ASTERACEAE

Achillea millefolium
Adenocaulon bicolor
Anaphalis margaritacea
**Bellis perennis*
**Conyza Canadensis*
**Erechtites minima*
Eriophyllum lanatum var. *achillaeoides*
**Gnaphalium luteo-album*
Hypochaeris radiata
Madia exigua
Madia sativa
**Senecio vulgaris*
**Sonchus oleraceus*
**Taraxacum officinale*
Wyethia angustifolia

yarrow
trail plant
pearly everlasting
English daisy
horseweed
Australian fireweed
common wooley sunflower
White Cudweed
Harry Cat's Ear
Threadstem Madia
Coast Tarweed
Common Groundsel
Common Sow Thistle
Dandelion
Narrow Leafed Mules Ears

BERBERIDACEAE

Vancouveria planipetala

Inside-out Flower

BORAGINACEAE

Cyanoglossum grande

Hound's Tongue

BRASSICACEAE

Cardamine californica
**Raphanus sativus*

Milk Maids
Wild Radish

CAMPANULACEAE

Campanula prenanthoides

California Harebell

CARYOPHYLLACEAE

**Stellaria media*

Chickweed

CLUSIACEAE

**Hypericum perforatum*

Klamath Weed

ERICACEAE

Pyrrola picta

Shinleaf

FABACEAE

Lathyrus vestitus var. *vestitus*
Lotus micranthus
**Trifolium repens*
Trifolium wildenovii
**Vicia villosa* ssp. *villosa*
**Vicia sativa* ssp. *nigra*

Hillside Pea
Small Flowered Lotus
White Clover
Tomcat Clover
Hairy Vetch, Winter Vetch
Narrow Leaved-vetch

GENTIANACEAE

Centaureum muehlenbergii

Centaury

GERANIACEAE

**Erodium botrys*
**Geranium dissectum*
**Geranium molle*

Broadleaf Filaree
Common Geranium
Dove's Foot Geranium

HYDROPHYLLACEAE

Nemophila heterophylla

Canyon Nemophila

LAMIACEAE

**Mentha pulegium*
Prunella vulgaris var. *lanceolata*
Stachys ajugoides var. *rigida*

Pennyroyal
Self-heal
Hedge-nettle

LINACEAE

**Linum bienne*

Flax

ONAGRACEAE

Epilobium ciliatum

Northern Willow Herb

| | | |
|------------------|---|----------------------|
| OXILIDACEAE | | |
| | <i>Oxalis oregana</i> | Redwood Sorrel |
| PAPAVERACEAE | | |
| | <i>Eschscholzia californica</i> | California poppy |
| PLANTAGINACEAE | | |
| | * <i>Plantago lanceolata</i> | English Plantain |
| POLEMONIACEAE | | |
| | <i>Navarretia squarrosa</i> | Skunkweed |
| POLYGALACEAE | | |
| | <i>Polygala californica</i> | Milkwort |
| POLYGONACEAE | | |
| | * <i>Rumex acetosella</i> | Sheep Sorrel |
| | * <i>Rumex crispus</i> | Curly Dock |
| PRIMULACEAE | | |
| | * <i>Anagallis arvensis</i> | Scarlet Pimpernel |
| | <i>Trientalis latifolia</i> | Starflower |
| RANUNCULACEAE | | |
| | <i>Ranunculus occidentalis</i> | western buttercup |
| ROSACEAE | | |
| | <i>Fragaria vesca</i> ssp. <i>vesca</i> | wood strawberry |
| RUBIACEAE | | |
| | * <i>Galium aparine</i> | Goose Grass |
| | <i>Galium murale</i> | Tiny bedstraw |
| SAXIFRAGACEAE | | |
| | <i>Tiarella trifoliata</i> | Lace Flower |
| SCROPHULARIACEAE | | |
| | * <i>Parentucellia viscosa</i> | Yellow Parentucellia |
| | <i>Pedicularis densiflora</i> | Indian Warrior |
| | * <i>Verbascum thapsus</i> | Wooley Mullein |
| VIOLACEAE | | |
| | <i>Viola sempervirens</i> | Evergreen Violet |

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS
CLASS–MONOCOTYLEDONAE-GRASSES

POACEAE

| | |
|--|----------------------------|
| * <i>Aira caryophyllea</i> | Silver European Hairgrass |
| <i>Agrostis stolonifera</i> | Creeping-bent Grass |
| * <i>Anthoxanthum odoratum</i> | Sweet Vernal Grass |
| * <i>Avena barbata</i> | Slender Wild Oat |
| * <i>Avena fatua</i> | Wild Oat |
| * <i>Briza maxima</i> | Large Quaking Grass |
| * <i>Briza minor</i> | Small Quaking Grass |
| * <i>Bromus hordeaceus</i> | Soft Chess |
| <i>Bromus vulgaris</i> | Columbia Brome |
| * <i>Cynosurus echinatus</i> | Hedgehog, Dogtail |
| * <i>Dactylis glomerata</i> | Orchard Grass |
| <i>Elymus glaucus</i> ssp <i>glaucus</i> | Blue Wildrye |
| <i>Hierochloa occidentalis</i> | Sweet Grass, Vanilla Grass |
| * <i>Holcus lanatus</i> | Velvet Grass |
| * <i>Lolium multiflorum</i> | Italian Rye Grass |
| * <i>Lolium perenne</i> | Perennial Rye Grass |
| * <i>Poa annua</i> | Annual Bluegrass |
| * <i>Vulpia bromoides</i> | Six-week Fescue |

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS
CLASS–MONOCOTYLEDONAE-SEDGES AND RUSHES

CYPERACEAE

| | |
|---|-------|
| <i>Carex deweyana</i> ssp. <i>leptopoda</i> | sedge |
|---|-------|

JUNCACEAE

| | |
|-----------------------|-----------|
| <i>Juncus effusus</i> | Rush |
| <i>Luzula comosa</i> | Wood Rush |

VASCULAR PLANTS DIVISION ANTHOPHYTA –ANGIOSPERMS
CLASS–MONOCOTYLEDONAE-HERBS

IRIDACEAE

| | |
|-------------------------|---------------|
| <i>Iris douglasiana</i> | Douglass Iris |
|-------------------------|---------------|

LILIACEAE

| | |
|--|------------------|
| <i>Scoliopus bigelovii</i> | Slink Pod |
| <i>Trillium ovatum</i> | Western Trillium |
| <i>Zigadenus fremontii</i> var. <i>fremontii</i> | Star Lily |

ORCHIDACEAE

| | |
|------------------------------|-------------------|
| <i>Corallorhiza maculata</i> | Spotted Coralroot |
|------------------------------|-------------------|